NOTE VIII.

ON A COLLECTION OF REPTILES AND FISHES FROM THE WEST-INDIES.

BY

Dr. Th. W. van LIDTH de JEUDE.

(Plate 2).

During the Dutch Expedition to the West-Indies the following reptiles and fishes were collected by Mr. J. R. H. Neervoort van de Poll, the Zoologist of the Expedition, who afterwards presented them to the Leyden Museum.

Lacertilia.

1. *Gymnodactylus antillensis*, nov. spec. (Pl. 2, fig. 1).

Head a fourth of the length of the body without tail, earopening oval, snout as long as the diameter of the orbit, pupil vertical. Back covered with uniform, juxtaposed round tubercles all of the same size, except those on the median line, which are smaller. Rostral large, broader than high, with a median cleft, followed by two rather large scales separated one from another by a small azygos shield, situated just behind the cleft of the rostral. Nostril pierced between the rostral, the large shield behind the rostral, two smaller nasalia and the first labial. Six upper and four or five lower labials. The first lower labial being very large, the last labials always small. Mental large, subcampanuliform, followed by one rather large shield, which is surrounded by scales gradually decreasing in size, passing in the very small granules of the throat. Abdominal scales in 16 rows, round, imbricate, larger than the

dorsal tubercles. No femoral or praeanal pores. Tail very fragile, cylindrical, covered with small round imbricate scales, those of the median series of the underside being much larger than the rest.

Brown above, with darker spots forming bands across the back, two dark brown U-shaped lines from eye to eye, the first and upper over the crown of the head, the second, lower, over the nape. Lower surface whitish.

Total length	70 m.m.
Head	9 m.m.
Fore limb	11 m.m.
Hind limb	14 m.m.
Tail	33 m.m.

Many specimens were captured in Curaçao and Aruba.

2. *Phyllodactylus Martini*, nov. spec. (Pl. 2, fig. 2 and 3).

Head large, oviform, very distinct from neck; the skin confluent with the cranial ossifications, crown of the head and interorbital space convex, a longitudinal shallow groove on the snout. Distance between the earopening and the orbit nearly as large as the diameter of the orbit, length of the snout one and two thirds the diameter of the orbit. Limbs moderate, digits inferiorly with one row of scales, distal expansion subcordiform, moderately large.

Head covered with very small, polygonal scales, flat on the snout, somewhat convex on the interorbital space and on the crown of the head. Rostral large, twice as broad as high; nostril pierced between the rostral, three nasalia (the anterior, upper, being by far the largest) and the first labial. Mental pentagonal, followed by one rather large scale, the others decreasing in size. Upper surface of the body covered with rather large keeled shields, serially arranged and leaving but very little space for fine granulations between them. The arrangement of those shields is very regular on the middle of the back, where a broader median streak, covered with fine granulations, separates two or three

longitudinal rows of shields on both sides of the back (fig. 3); but on the flanks the shields are not so regularly arranged, so that it is difficult to fix the real number of longitudinal rows, about 14 à 16. Abdominal scales smooth, round, imbricate. Tail with rather large scales (not so large as in fig. 2) with a series of large undivided infracaudals over the whole length of the tail. Hind limbs covered on the upper surface with keeled shields, on the lower surface with flat scales; forelimbs wholly covered with flat scales.

Light gray above, with a longitudinal dark streak beginning between the shoulders and running along the median line up to the commencement of the tail, and two longitudinal dark streaks running on each side on the flanks and beginning on the crown of the head.

A single specimen was captured in Curaçao.

I dedicate this species to Dr. K. Martin, Professor in Geology and Paleontology at the University of Leyden, one of the leaders of the Expedition to the West-Indies, who most readily gave me very interesting informations as to the native names and the habitat of some of the captured animals.

3. *Thecadactylus rapicaudus*, Houtt.

Specimens from Curaçao and Aruba. (Native name: pega-pega).

4. *Anolis alligator*, D. & B.

Six specimens from Martinique.

5. *Anolis lineatus*, Daud.

Eight specimens were collected in Curaçao, five in Aruba.

6. *Iguana tuberculata*, Laur.

Two specimens from Aruba.

7. *Cnemidophorus murinus*, Laur.

Eleven specimens from Curaçao.

8. *Cnemidophorus lemniscatus*, Daud.

Three specimens from Caracas (Venezuela).

9. *Cnemidophorus nigricolor*, Ptrs.

Four specimens from Los Roques (small islands north of Venezuela).

10. *Cnemidophorus arubensis*, nov. spec.

This species shows a great resemblance on one side with *C. murinus*, on the other side with *C. lemniscatus*. It agrees with *C. lemniscatus* in the number of the rows of ventrals, viz. 8; as to the coloration it resembles *C. murinus*.

Head moderate. Nostril between the two nasals. Parietals five, supraoculars four, five or six supralabials, no freno-orbital, anterior gular scales subequal, without enlarged medians; mesoptychium with three or four rows of enlarged scales, separated from the free edge of the collar by four or five rows of small granules. Dorsal scales small, granular, smooth. Ventral plates in eight longitudinal and thirty-five till thirty-seven transverse series. Generally three large praeanals forming a triangle, but sometimes the foremost of the three divided in two parts. The anterior row of the brachials larger than the following, though not so large as those in *C. lemniscatus*; the ante-brachials in two rows, the inner largest, the outer extending only half down the inner; forearm entirely granular inferiorly. Femorals in six or seven rows, one of which is large; tibials in two or three rows, the outer very large. Femoral pores generally thirty, in one specimen twenty-six and twenty-seven. Male with a spine on each side of the vent.

Olive above, sides with a great many rather large blue spots; these spots extend to the outer series of ventrals and cover the hinder limbs as far as the toes, no whitish longitudinal band on the hind side of the thighs.

Two of the eight specimens have four bluish longitudinal bands on the upper part of the body, extending from the head

to the tail, but moreover they show the blue ocelli on the sides and the hind limbs. Both these specimens are females.

Eight specimens were captured in Aruba. (Native name: blausana).

11. *Gymnophthalmus quadrilineatus*, L.

Many specimens from Curaçao.

Serpentes.

1. *Dromicus antillensis*, Schl.

One specimen from Curaçao.

2. *Leptophis liocercus*, Neuw.

One specimen from Surinam.

3. *Dipsas annulata*, L.

Two specimens from Aruba.

4. *Crotalus horridus*, var. *unicolor*, v. L. d. J.

One specimen of a rattle-snake from Aruba has three pairs of large scales behind the rostral, 166 ventrals, one undivided anal and 22 caudals, the first of which is divided in two. It shows no sign of streaks behind the eye, nor any marking whatever. It is on the back of a uniform gray color, somewhat lighter on the ventrals; the very short tail is darker than the body, and its lower part of a bluish black color. This specimen measures about 62 c.m.

On examining the rattle-snakes in the collection of the Leyden Museum, I found a specimen without indication of locality, presented to our Museum by the Royal Zoological Society »Natura Artis Magistra" at Amsterdam, which specimen agrees very well with the specimen from Aruba. It is of nearly the same length, of the same color without any marking, and shows also the bluish black lower surface of the end of the tail. The tail of this

specimen is longer than that of the snake from Aruba. As to the arrangement of the scales on the head it wholly agrees with the first mentioned specimen, and has 160 ventrals, one undivided anal and 28 caudals, the first of which is divided in two.

Moreover, two specimens from Aruba are still living in the Zoological Gardens of the R. Z. Society »N. A. M." at Amsterdam. They were also collected during the Expedition and have been presented to the forenamed Society. One of them resembles the first mentioned specimen in color and in the total absence of any marking, the other is also of the same color, but shows on the back a trace of lozenge-shaped spots. Both have the bluish black color on the lower surface of the end of the tail.

Batrachia.

1. ? *Rana Copii*, Blgr.

One specimen with tadpoles from Aruba. According to the inhabitants of the island, this specimen is not the »dori" (the native name of the frog common in Aruba), which frog creeps into the ground during the dry period, and consequently was not to be seen when the Expedition visited Aruba.

2. *Dendrobates trivittatus*, Spix.

One specimen with tadpoles from Surinam.

3. *Phryniscus cruciger*, Mart.

Many specimens from the coast of Coro (Venezuela).

4. *Bufo marinus*, L.

Two specimens from Surinam.

5. *Hyla maxima*, Laur.

One specimen from Surinam.

Pisces.

The collection of fishes, though a small one, is very interesting. The marine fishes n° 1—5 and n° 8 were presented to Mr. Neervoort van de Poll by Mr. van Lier at Curaçao. The numbers 6, 7 and 9 were captured by Mr. Neervoort van de Poll himself.

The rarest of all is certainly *Serranus tigrinus* Bl. (n° 2), a fish the origin of which was up to this time supposed to be the East-Indian sea, and which in this collection is found together with *Myripristis jacobus* Cuv. & Val., *Pomacanthus paru* Bl., *Gobius soporator* Cuv. & Val., and *Muraena catenata* Bl., all well-known West-Indian forms.

Blennius crinitus Cuv. & Val. (n° 5), originating, according to Cuvier, from the sea in the neighbourhood of la Rochelle, was captured near Curaçao, which sustains Günther's statement, who mentions a specimen from Pernambuco.

The freshwaterfishes (n° 6 and 7), belonging to the curious family of Cyprinodontidae, were captured in the very small rivulets of Curaçao and Aruba. As to the habitat of these small viviparous fishes, Prof. K. Martin informs me, that when the Expedition visited Aruba (in the dry period) the water of the pool filled a groove of a width of about $^1/_3$ meter and a depth of only some centimeters. The rivulet of Curaçao was not so destitute of water as that of Aruba, whereas in the pool of Bonaire almost no water was to be seen.

1. *Myripristis jacobus*, Cuv. & Val.

D. $11/\frac{1}{9+1}$. A. 4/12. V. 1/7.

One badly preserved specimen from Curaçao.

2. *Serranus tigrinus*, Bl.

D. 10/12. A. 3/8.

Our specimen has a length of 93 m.m. and differs from the figures of Bloch (t. 237) and Seba (III. 27. 15 instead III. 27. 5 as is quoted by Cuvier and Günther), in having the back of a dark color and only 4 cross-bands, viz.:

the 1st midway between ventral- and anal fin;
the 2nd at the beginning of the anal fin;
the 3rd nearly at the middle of the anal fin;
the 4th between anal- and caudal fin.

The end of the tail and the beginning of the caudal is of a dark color. Dark, oblong spots, serially arranged in a direction from the root of the pectoral to the lower part of the tail, are placed between the cross-bands. The dark spot between the 3rd and 5th ray of the dorsal fin is very characteristical.

Our specimen has the middle spine on the operculum very well developed, and the caudal fin notched as figured by Bloch, and not truncate as in Cuvier's and Seba's specimen.

One specimen, very well preserved but somewhat discolored by the action of the alcohol. — Curaçao.

3. *Pomacanthus paru*, Bl.

One young specimen with 5 distinct cross-bands without white crescents or brown spots (Gthr. Cat. of Fishes. II. p. 56. C: *Pomacanthus quinquecinctus* Cuv.). — Curaçao.

4. *Gobius soporator*, Cuv. & Val.

Nine specimens from Curaçao.

5. *Blennius crinitus*, Cuv. & Val.

Two specimens (from Curaçao) with 12 + 15 dorsal and 2 + 16 anal rays, with some little filaments above the eye, and a filamentous crest on the nape of the neck. The snout is obtuse, with the anterior profile abruptly descending. They both have a somewhat larger tooth between the teeth of the underjaw.

One of the specimens very clearly shows the spot between the 1st and the 2nd dorsal spine, the other specimen is too darkly colored (probably under the action of the alcohol) to show the dark spot.

This second specimen has another particularity mentioned by Cuvier and not quoted in Günther's Cat. of Fishes,

viz.: »les excroissances en champignon" of the first and second anal ray.

6. *Poecilia Vandepolli*, nov. spec. (Pl. 2, fig. 4 and 5).

D. 8. A. 9. V. 5. P. 14 à 15. L. lat. 25—27. L. transv. 9.

The height of the body is contained nearly four times in the length with caudal fin (thrice without caudal). The narrow part of the tail is half the height of the body. Diameter of the eye one third the length of the head. Distance between the root of the pectoral and the tip of the snout as large as the height of the body. In the females the anal fin is nearly opposite to the dorsal, a very little behind; in the males the anal fin is placed in advance of the dorsal fin and transformed in an intromittent organ, having the 3rd, 4th and 5th ray much elongate, and an adipose spoonlike appendix on a small distance from the tip of the fin (fig. 5). The second ray of the ventrals is also much elongated and put against the anal fin.

An outer series of large curved teeth with a band of small conical teeth behind. Both the curved and the conical teeth, especially the former, have a brown colored top, and are somewhat moveable, the underpart of the tooth being inserted on an excrescence of the jawbone with a kind of joint.

The color of the back and of the tail is a yellowish brown, the belly and the lower surface of the head being silvery. Behind the interorbital region is a dark spot continued in a dark line, running along the median line of the back up to the beginning of the caudal fin. Dark colored lines, running along the margin of the scales, form a dark brown reticulation on the back and the tail. A blackish lateral line. Several specimens have 6 shadowy crossbands on the tail.

Two of the males with a round black spot (as large as the eye) a little above and behind the root of the pectoral.

Length of the largest female, measured with caudal fin 35 m.m.

Length of the largest male, measured with caudal fin 31 m.m.

Many specimens were collected in Curaçao.

I dedicate this species to Mr. J. R H. Neervoort van de Poll, the Zoologist of the Expedition, to whom the Leyden Museum is indebted for this interesting collection.

7. *Poecilia Vandepolli*, var. *arubensis*, v. L. d. J. (Pl. 2, fig. 6—10).

Agrees with the former in the number of finrays, the arrangement and insertion of the teeth (see fig. 7—10), the number of scales, and the form of the intromittent organ in the males, but differs in the proportions of the different parts of the body and in the color. The proportion between height and length is in this variety as one to three and a half without caudal fin, or as one to four and a half with the caudal fin. The height of the narrowest part of the tail is two thirds of the total height of the body. Anal fin in the females somewhat more advanced than in the former species and opposite to the dorsal fin.

Color brown, yellowish brown on the belly. A dark spot on the head behind the interorbital space, continued in a line which runs up to the beginning of the dorsal fin. Dark reticulation as in the former, but lateral line nearly invisible. Most of the specimens have 6 or 7 shadowy crossbands on the tail. Dorsal and caudal fin with black lines and spots.

Total length of the largest female 57 m.m. A female with embryos measured 50 m.m.

Total length of the largest male 36 m.m.

Many specimens were captured in Aruba.

8. *Muraena catenata*, Bl.

One specimen from Curaçao.

9. *Cheilichthys psittacus*, Bl. Schn.

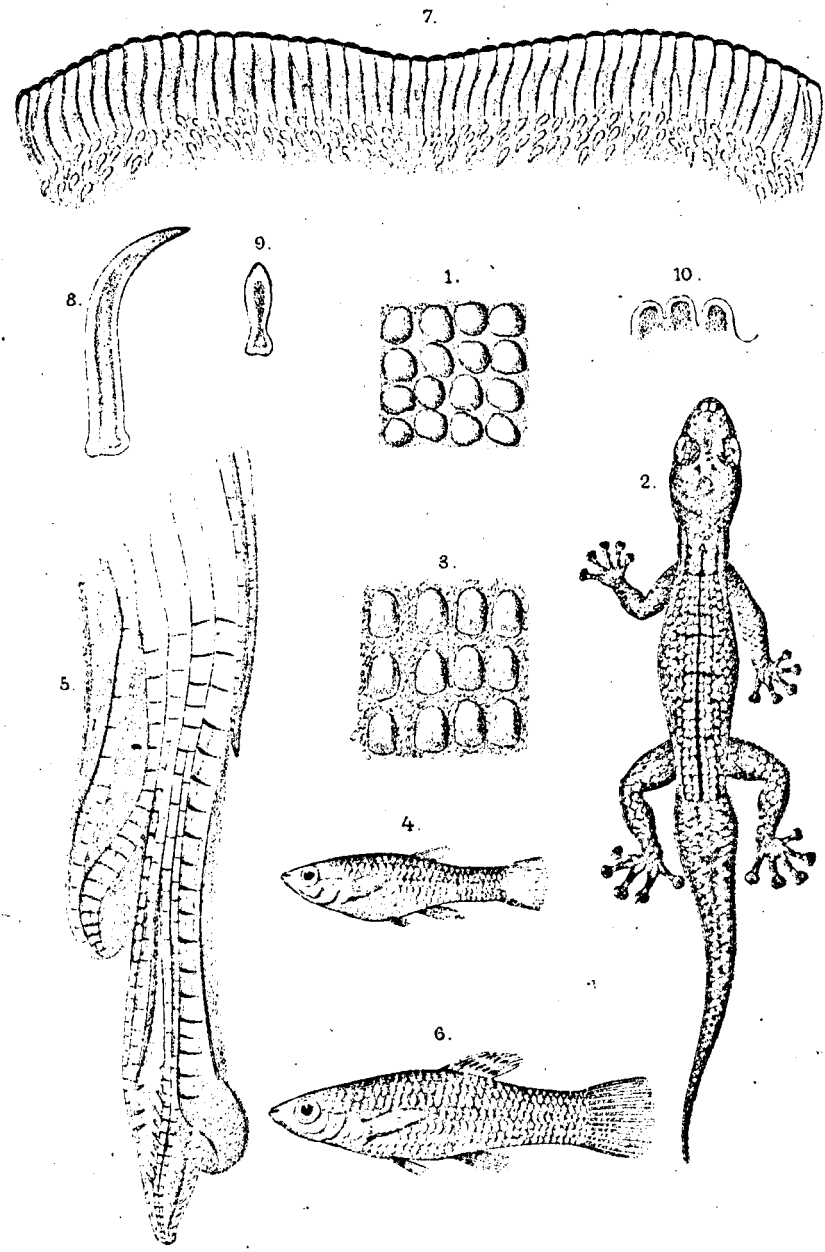
Five specimens were captured at Paramaribo. Length

about 25 m.m. They differ from Steindachner's description and figure (Verh. Zool. Bot. Ges. Wien. 1861. p. 141; taf. 4) in having 7 crossbands. Between the band in the neighbourhood of the pectorals and that at the root of the dorsal two distinctly separated bands are present (as in the figure in Bloch-Schneider, pl. 95) and not one broad crossband as in Steindachner's specimen.

Five specimens from Surinam already in the collection of the Leyden Museum and much larger (from 58 to 95 m.m.) have also seven crossbands, just as the newly obtained specimens.

Explanation of the plate.

Fig. 1. Dorsal tubercles of *Gymnodactylus antillensis* v. L. d. J., × 25.
Fig. 2. *Phyllodactylus Martini* v. L. d. J., natural size.
Fig. 3. Dorsal shields of the same, enlarged.
Fig. 4. *Poecilia Vandepolli* v. L. d. J., natural size.
Fig. 5. Anal fin of a male of the same species modified into an intromittent organ, × 26.
Fig. 6. *Poecilia Vandepolli*, var. *arubensis* v. L. d. J., natural size.
Fig. 7. Teeth of this variety, × 50.
Fig. 8. A large curved tooth of the outer series of the same, × 130.
Fig. 9. A small conical tooth of the inner band of the same, × 130.
Fig. 10. Excrescences of the jawbone, whereupon the teeth are fixed, × 130.



Dr. van Lidth de Jeude et H. Verlint ad nat. del. H. Verlint lith. P.W.M. Trap impr.

1. Gymnodactylus antillensis *v. L. d. J.*
2, 3. Phyllodactylus Martini *v. L. d. J.*
4, 5. Poecilia Vandepolli *v. L. d. J.*
6—10. Poecilia Vandepolli, *var.* arubensis *v. L. d. J.*